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REMARKS

Claims 1 through 32 are pending in the Application. Claims 4, 17, 20 and 24 have been amended.

Claim Objections

The Office Action objected to claims 4, 17, 20 and 24 for lack of antecedent basis of certain terms. Amendments have been made to these claims to correct the lack of antecedent basis.

The Office Action objected to claims 15, 16, 19, stating that the phrase, "wherein the memory further comprises operational instructions corresponding to," should be replaced with "wherein the operational instructions stored in the memory correspond to," in order to improve the clarity of the claim language. In addition, the Office Action objected to claims 21, 22, 25, 26, 28, 30 and 31, stating that the term "wherein the memory further comprises operational instructions that cause" should be replaced with "wherein the operational instructions stored in the memory cause," in order to improve the clarity of the claim language. However, the meaning of the claims 15, 16, 19, 21, 22, 25, 26, 28, 30 and 31 would be clear to a person of skill in the art and do not need to be amended for clarity. The meaning of every term used in the claims is apparent from the specification and drawings at the time the application was filed. See M.P.E.P. 2173.05(a).

Claim Rejections under 35 U.S.C. §103

The Office Action rejected Claims 1-3, 5, 7-9, 11-12, 14-17, 19-22, 24-26 and 28 through 31 under 35 U.S.C. §103(a) as being unpatentable over U.S. Patent No. 6,122,514 to Spaur et al. (the Spaur reference) in view of US Patent No. 6,832,087 to Gwon, et al. (the Gwon reference). Applicants respectfully traverse this rejection because neither the Spaur reference nor the Gwon reference, either alone or in combination, disclose or suggest the requirements of the claims.

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Independent Claim 1 and Dependent Claims 2 through 7

Neither the Spaur reference nor the Gwon reference disclose or suggest the requirements, *inter alia*, of claim 1 of, "when the Internet packet is being received when the channel scan request is received, scanning at least one other channel of the plurality of channels, but less than all of the plurality of channels; after scanning the at least one other channel, tuning to the one of the plurality of channels to transmit at least one outbound Internet packet; and scanning at least another channel of the plurality of channels."

With respect to the Spaur reference, the Office Action first cites Figure 5A, items 170 through 182 and column 13, line 67 through column 14, line 3 as disclosing requirements of claim 1. However, the Office Action has incorrectly interpreted the Spaur reference. The Spaur reference with respect to Figure 5A, Items 170 through 182 at column 13, lines 8 through 16 states that:

At step 170, a decision is made as to whether or not the particular information transfer is to be started immediately. If this decision is in the affirmative, the link selector 64 takes control to initiate the transfer using one or more selected network channels 34a-34n at step 174. If the decision is in the negative, the information to be transferred is buffered and the link scheduler 70 obtains the current location of the mobile unit having the communications system 10 at step 178. The link scheduler 70 then determines the identity of other network channels that are becoming available for selection, based on current location of the mobile unit and the anticipated change in location of the mobile unit at step 182. The anticipated channels that are becoming available and their availability time is then provided, at step 186, to the link selector 64 for determining each of their suitability values.

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Thus, the Spaur reference discloses that no transfer of information occurs until the link scheduler 70 determines the identity of other network channels that are becoming available for selection, based on current location of the mobile unit and the anticipated change in location of the mobile unit, at column 13, lines 8 through 16. This disclosure of the Spaur reference actually teaches away from claim 1 that, "when the Internet packet is being received when the channel scan request is received, scanning at least one other channel of the plurality of channels, but less than all of the plurality of channels; after scanning the at least one other channel, tuning to the one of the plurality of channels to transmit at least one outbound Internet packet; and scanning at least another channel of the plurality of channels."

The Office Action also cites column 13, line 67 through column 14, line 3 as disclosing requirements of claim 1. Again, this Office Action has incorrectly taken a small portion of the Spaur reference out of context and misinterpreted it. At column 13, lines 43 through column 14, line 3, the Spaur reference states:

As part of the operational steps involving the link scheduler 70, a determination is made as to whether or not a currently utilized network channel might be unavailable or go off line before completion of the particular information transfer. In accordance with this function, at step 218, the current location of the mobile unit having the communications system 10 is obtained. At step 222, a determination is made as to when the currently utilized network channel will go off line. This determination uses the current location of the mobile unit and the anticipated change in position of the mobile unit using velocity information and/or route or schedule information that the mobile unit follows. . . . This information can be combined with location-related information regarding the next location node and the estimated time to travel to it. From this data, the link scheduler 70 can be used in determining that a particular channel will go off line, as well as network channels that will become available. After this determination is made, the link scheduler 70, at step 226, informs the link selector 64 of the date and time when the currently utilized network channel will go off line. The link

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selector 64 is able to use this information in controlling the switching from the currently used network channel to a new or different selected channel.

Nowhere does the Spaur reference discuss a request for scanning or how scanning of the channels is performed. Thus, the Spaur reference fails to disclose the requirements, *inter alia*, of claim 1 of, "when the Internet packet is being received when the channel scan request is received, scanning at least one other channel of the plurality of channels, but less than all of the plurality of channels; after scanning the at least one other channel, tuning to the one of the plurality of channels to transmit at least one outbound Internet packet; and scanning at least another channel of the plurality of channels."

The Gwon reference also fails to disclose or suggest the requirements, *inter alia*, of claim 1 of, "when the Internet packet is being received when the channel scan request is received, scanning at least one other channel of the plurality of channels, but less than all of the plurality of channels; after scanning the at least one other channel, tuning to the one of the plurality of channels to transmit at least one outbound Internet packet; and scanning at least another channel of the plurality of channels." The Gwon reference describes a procedure for minimizing the handoff latency resulting from standard Mobile IP handoff procedures, as stated at column 2, lines 36 through 39. As stated, at column 1, lines 35 through 47, two types of handoffs, L2 and L3. "A handoff occurs when a MN moves from one radio AP to another. A mere change of radio AP is called a "Layer 2 (L2) handoff," which does not involve any Layer 3 (L3) signaling at the IP level. If the new radio access point is associated with a new subnet, i.e., if the MN moves from one subnet to another, a changing in routing reachability occurs and requires Layer 3 (L3) protocol action. This L3 protocol action is called a "L3 handoff" and usually involves exchange of a series of IP messages that are used to update routing information for the MN to make sure that data destined to the MN is routed through the new subnet to the MN." The Gwon reference describes that in order to prevent L3 handoff latency, a pre-registration handoff method allows the L3 handoff to begin even before the L2 handoff begins, as stated at column 2, lines 57 through 65. As stated in column 4, lines 13 through 35, IP tunnels are established between a source node and a set of candidate nodes. The tunnels are used to forward data to the mobile node after a communication link between the mobile node and the source node goes down. Once

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a target node is identified from the candidate nodes, using the tunnel from the source node to the target node, the mobile node keeps IP data communication with the source node after the L2 handoff but before the L3 handoff. Again at column 9, lines 35 through 51 cited in the Office Action, the Gwon reference states that:

With the tunnel that remains up [between the old FA (oFA) and new FA (nFA)], the MN can receive data from the oFA while on the nFA's subnet. Thus, the tunnel between oFA and nFA allows the MN to continue using the oFA for data communication while on the nFA's subnet. . . . The MN must eventually perform a formal Mobile IP registration illustrated in FIG. 1 after an L2 link with the nFA is established, but this can be delayed as required by the MN. Until the MN performs registration, a new FA and an old FA will setup and move a tunnel as required to give MN continued connectivity.

Thus, the Gwon reference nowhere discloses a request for scanning or how scanning of the channels is performed. As such, the Gwon reference fails to disclose the requirements, *inter alia*, of claim 1 of, "when the Internet packet is being received when the channel scan request is received, scanning at least one other channel of the plurality of channels, but less than all of the plurality of channels; after scanning the at least one other channel, tuning to the one of the plurality of channels to transmit at least one outbound Internet packet; and scanning at least another channel of the plurality of channels."

The combination of the references also fails to suggest the requirements of claim 1. As explained above, both the Spaur reference and the Gwon reference merely disclose handoff procedures and fail to even disclose a request for scanning or how scanning of the channels is performed. Since neither the Spaur reference nor the Gwon reference disclose or suggest the requirements, *inter alia*, of claim 1 of, "when the Internet packet is being received when the channel scan request is received, scanning at least one other channel of the plurality of channels, but less than all of the plurality of channels; after scanning the at least one other channel, tuning to the one of the plurality of channels to transmit at least one outbound Internet packet; and scanning at least another channel of the plurality of channels," the combination also fails to suggest the embodiment of claim 1.

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The dependent claims 2 through 7 add further patentable matter to Claim 1 and thus are further differentiated and patentable under 35 U.S.C. §103 over the Spaur reference in view of the Gwon reference.

Independent Claim 8 and Dependent Claims 9 through 13

Neither the Spaur reference nor the Gwon reference disclose or suggest the requirements, *inter alia*, of claim 8 of, “when the network interface protocol channel scan request is received, hopping between a channel supporting the TCP connection within a wireless local area network (WLAN) and other channels of the WLAN to avoid excess latency in acknowledging receipt of a packet formatted in accordance with the Internet Protocol or a portion of the packet during scanning of the other channels of the WLAN.”

With respect to the Spaur reference and claim 8, the Office Action cites on pages 9 and 10 of the Office action, Figure 5A, items 170 through 182 and column 13, line 67 through column 14, line 3, as disclosing requirements of claim 8. However, the Office Action has incorrectly interpreted the Spaur reference. The Spaur reference with respect to Figure 5A, Items 170 through 182 at column 13, lines 8 through 16 states that:

At step 170, a decision is made as to whether or not the particular information transfer is to be started immediately. If this decision is in the affirmative, the link selector 64 takes control to initiate the transfer using one or more selected network channels 34a-34n at step 174. If the decision is in the negative, the information to be transferred is buffered and the link scheduler 70 obtains the current location of the mobile unit having the communications system 10 at step 178. The link scheduler 70 then determines the identity of other network channels that are becoming available for selection, based on current location of the mobile unit and the anticipated change in location of the mobile unit at step 182. The anticipated channels that are becoming available and their availability time is then provided, at step 186, to the link selector 64 for determining each of their suitability values.

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Thus, the Spaur reference discloses that no transfer of information occurs until the link scheduler 70 determines the identity of other network channels that are becoming available for selection, based on current location of the mobile unit and the anticipated change in location of the mobile unit, at column 13, lines 8 through 16. This aspect of the Spaur reference actually teaches away from the embodiment in claim 8 of, "when the network interface protocol channel scan request is received, hopping between a channel supporting the TCP connection within a wireless local area network (WLAN) and other channels of the WLAN to avoid excess latency in acknowledging receipt of a packet formatted in accordance with the Internet Protocol or a portion of the packet during scanning of the other channels of the WLAN." The Office Action also cites column 13, line 67 through column 14, line 3 as disclosing requirements of claim 8. Again, this Office Action has incorrectly taken a small portion of the Spaur reference out of context and misinterpreted the Spaur reference. At column 13, lines 43 through column 14, line 3, the Spaur reference states:

As part of the operational steps involving the link scheduler 70, a determination is made as to whether or not a currently utilized network channel might be unavailable or go off line before completion of the particular information transfer. In accordance with this function, at step 218, the current location of the mobile unit having the communications system 10 is obtained. At step 222, a determination is made as to when the currently utilized network channel will go off line. This determination uses the current location of the mobile unit and the anticipated change in position of the mobile unit using velocity information and/or route or schedule information that the mobile unit follows. . . . This information can be combined with location-related information regarding the next location node and the estimated time to travel to it. From this data, the link scheduler 70 can be used in determining that a particular channel will go off line, as well as network channels that will become available. After this determination is made, the link scheduler 70, at step 226, informs the link selector 64 of the date and time when the currently utilized network channel will go off line. The link

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selector 64 is able to use this information in controlling the switching from the currently used network channel to a new or different selected channel.

Thus, the Spaur reference nowhere discloses how scanning of other channels is performed or hopping between a channel supporting the TCP connection within a wireless local area network (WLAN) and other channels of the WLAN to avoid excess latency. Thus, the Spaur reference fails to disclose the requirements, *inter alia*, of claim 8 of, "hopping between a channel supporting the TCP connection within a wireless local area network (WLAN) and other channels of the WLAN to avoid excess latency in acknowledging receipt of a packet formatted in accordance with the Internet Protocol or a portion of the packet during scanning of the other channels of the WLAN."

The Gwon reference also fails to disclose or suggest the requirements, *inter alia*, of claim 8 of, "hopping between a channel supporting the TCP connection within a wireless local area network (WLAN) and other channels of the WLAN to avoid excess latency in acknowledging receipt of a packet formatted in accordance with the Internet Protocol or a portion of the packet during scanning of the other channels of the WLAN." The Gwon reference describes a procedure for minimizing the handoff latency resulting from standard Mobile IP handoff procedures, as stated at column 2, lines 36 through 39. The Gwon reference describes that in order to prevent L3 handoff latency, a pre-registration handoff method allows the L3 handoff to begin even before the L2 handoff begins, as stated at column 2, lines 57 through 65. As stated in column 4, lines 13 through 35, IP tunnels are established between a source node and a set of candidate nodes. The tunnels are used to forward data to the mobile node after a communication link between the mobile node and the source node goes down. Once a target node is identified from the candidate nodes, using the tunnel from the source node to the target node, the mobile node keeps IP data communication with the source node after the L2 handoff but before the L3 handoff. Again at column 9, lines 35 through 51, the Gwon reference explains that:

With the tunnel that remains up [between the old FA (oFA) and new FA (nFA)], the MN can receive data from the oFA while on the nFA's subnet. Thus, the tunnel between oFA and nFA allows the MN to continue using the oFA for data communication while on the nFA's subnet. . . . The MN must eventually perform

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a formal Mobile IP registration illustrated in FIG. 1 after an L2 link with the nFA is established, but this can be delayed as required by the MN. Until the MN performs registration, a new FA and an old FA will setup and move a tunnel as required to give MN continued connectivity.

Thus, the Gwon reference nowhere discloses how scanning of other channels is performed or hopping between a channel supporting the TCP connection within a wireless local area network (WLAN) and other channels of the WLAN to avoid excess latency. As such, the Gwon reference fails to disclose the requirements, *inter alia*, of claim 8 of, "hopping between a channel supporting the TCP connection within a wireless local area network (WLAN) and other channels of the WLAN to avoid excess latency in acknowledging receipt of a packet formatted in accordance with the Internet Protocol or a portion of the packet during scanning of the other channels of the WLAN."

The combination of the references also fails to suggest the requirements of claim 8. As explained above, both the Spaur reference and the Gwon reference merely disclose handoff procedures and fail to disclose how scanning of other channels is performed or hopping between a channel supporting the TCP connection within a wireless local area network (WLAN) and other channels of the WLAN to avoid excess latency. Since neither the Spaur reference nor the Gwon reference disclose or suggest the requirements, *inter alia*, of claim 8 of, "hopping between a channel supporting the TCP connection within a wireless local area network (WLAN) and other channels of the WLAN to avoid excess latency in acknowledging receipt of a packet formatted in accordance with the Internet Protocol or a portion of the packet during scanning of the other channels of the WLAN," the combination also fails to suggest the embodiment of claim 8.

The dependent claims 9 through 13 add further patentable matter to Claim 8 and thus are further differentiated and patentable under 35 U.S.C. §103 over the Spaur reference in view of the Gwon reference.

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Independent Claim 14 and Dependent Claims 15 through 19

Neither the Spaur reference nor the Gwon reference disclose or suggest the requirements, *inter alia*, of claim 14 of, "memory operably coupled to the processing module, wherein the memory stores operational instructions that cause the processing module to: . . . when the one of the datagrams is being received when the channel scan request is received, scan at least one other channel of the plurality of channels, but less than all of the plurality of channels; after scanning the at least one other channel, tune to the one of the plurality of channels to transmit at least one outbound datagram; and scanning at least another channel of the plurality of channels."

With respect to the Spaur reference, the Office Action on page 15 cites Figure 5A, items 170 through 182 and column 13, line 67 through column 14, line 3 of the Spaur reference as disclosing requirements of claim 14. However, the Office Action has incorrectly interpreted the Spaur reference. The Spaur reference with respect to Figure 5A, Items 170 through 182 at column 13, lines 8 through 16 states that:

At step 170, a decision is made as to whether or not the particular information transfer is to be started immediately. If this decision is in the affirmative, the link selector 64 takes control to initiate the transfer using one or more selected network channels 34a-34n at step 174. If the decision is in the negative, the information to be transferred is buffered and the link scheduler 70 obtains the current location of the mobile unit having the communications system 10 at step 178. The link scheduler 70 then determines the identity of other network channels that are becoming available for selection, based on current location of the mobile unit and the anticipated change in location of the mobile unit at step 182. The anticipated channels that are becoming available and their availability time is then provided, at step 186, to the link selector 64 for determining each of their suitability values.

Thus, the Spaur reference discloses that no transfer of information occurs until the link scheduler 70 determines the identity of other network channels that are becoming available for selection,

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based on current location of the mobile unit and the anticipated change in location of the mobile unit, at column 13, lines 8 through 16. This aspect of the Spaur reference actually teaches away from claim 14, of, "memory operably coupled to the processing module, wherein the memory stores operational instructions that cause the processing module to: . . . when the one of the datagrams is being received when the channel scan request is received, scan at least one other channel of the plurality of channels, but less than all of the plurality of channels; after scanning the at least one other channel, tune to the one of the plurality of channels to transmit at least one outbound datagram; and scanning at least another channel of the plurality of channels."

The Office Action also cites column 13, line 67 through column 14, line 3 as disclosing requirements of claim 14. Again, this Office Action has incorrectly taken a small portion of the Spaur reference out of context and misinterpreted the Spaur reference. At column 13, lines 43 through column 14, line 3, the Spaur reference states:

As part of the operational steps involving the link scheduler 70, a determination is made as to whether or not a currently utilized network channel might be unavailable or go off line before completion of the particular information transfer. In accordance with this function, at step 218, the current location of the mobile unit having the communications system 10 is obtained. At step 222, a determination is made as to when the currently utilized network channel will go off line. This determination uses the current location of the mobile unit and the anticipated change in position of the mobile unit using velocity information and/or route or schedule information that the mobile unit follows. . . . This information can be combined with location-related information regarding the next location node and the estimated time to travel to it. From this data, the link scheduler 70 can be used in determining that a particular channel will go off line, as well as network channels that will become available. After this determination is made, the link scheduler 70, at step 226, informs the link selector 64 of the date and time when the currently utilized network channel will go off line. The link selector 64 is able to use this information in controlling the switching from the currently used network channel to a new or different selected channel.

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Thus, the Spaur reference nowhere even discloses a request for scanning or how scanning of the channels is performed. Thus, the Spaur reference fails to disclose the requirements, *inter alia*, of claim 14 of, "memory operably coupled to the processing module, wherein the memory stores operational instructions that cause the processing module to: . . . when the one of the datagrams is being received when the channel scan request is received, scan at least one other channel of the plurality of channels, but less than all of the plurality of channels; after scanning the at least one other channel, tune to the one of the plurality of channels to transmit at least one outbound datagram; and scanning at least another channel of the plurality of channels."

The Gwon reference also fails to disclose or suggest the requirements, *inter alia*, of claim 14 of, "memory operably coupled to the processing module, wherein the memory stores operational instructions that cause the processing module to: . . . when the one of the datagrams is being received when the channel scan request is received, scan at least one other channel of the plurality of channels, but less than all of the plurality of channels; after scanning the at least one other channel, tune to the one of the plurality of channels to transmit at least one outbound datagram; and scanning at least another channel of the plurality of channels." The Gwon reference describes a procedure for minimizing the handoff latency resulting from standard Mobile IP handoff procedures, as stated at column 2, lines 36 through 39. The Gwon reference describes that in order to prevent L3 handoff latency, a pre-registration handoff method allows the L3 handoff to begin even before the L2 handoff begins, as stated at column 2, lines 57 through 65. As stated in column 4, lines 13 through 35, IP tunnels are established between a source node and a set of candidate nodes. The tunnels are used to forward data to the mobile node after a communication link between the mobile node and the source node goes down. Once a target node is identified from the candidate nodes, using the tunnel from the source node to the target node, the mobile node keeps IP data communication with the source node after the L2 handoff but before the L3 handoff. Again at column 9, lines 35 through 51, the Gwon reference states that:

With the tunnel that remains up [between the old FA (oFA) and new FA (nFA)], the MN can receive data from the oFA while on the nFA's subnet. Thus, the tunnel between oFA and nFA allows the MN to continue using the oFA for data

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communication while on the nFA's subnet. . . . The MN must eventually perform a formal Mobile IP registration illustrated in FIG. 1 after an L2 link with the nFA is established, but this can be delayed as required by the MN. Until the MN performs registration, a new FA and an old FA will setup and move a tunnel as required to give MN continued connectivity.

Thus, the Gwon reference nowhere discloses a request for scanning or how scanning of the channels is performed. As such, the Gwon reference fails to disclose the requirements, *inter alia*, of claim 14 of, "memory operably coupled to the processing module, wherein the memory stores operational instructions that cause the processing module to: . . . when the one of the datagrams is being received when the channel scan request is received, scan at least one other channel of the plurality of channels, but less than all of the plurality of channels; after scanning the at least one other channel, tune to the one of the plurality of channels to transmit at least one outbound datagram; and scanning at least another channel of the plurality of channels."

The combination of the references also fails to suggest the requirements of claim 14. As explained above, both the Spaur reference and the Gwon reference merely disclose handoff procedures and fail to even disclose a request for scanning or how scanning of the channels is performed. Since neither the Spaur reference nor the Gwon reference disclose or suggest the requirements, *inter alia*, of claim 14 of, "memory operably coupled to the processing module, wherein the memory stores operational instructions that cause the processing module to: . . . when the one of the datagrams is being received when the channel scan request is received, scan at least one other channel of the plurality of channels, but less than all of the plurality of channels; after scanning the at least one other channel, tune to the one of the plurality of channels to transmit at least one outbound datagram; and scanning at least another channel of the plurality of channels," the combination also fails to suggest the embodiment of claim 14.

The dependent claims 15 through 19 add further patentable matter to Claim 14 and thus are further differentiated and patentable under 35 U.S.C. §103 over the Spaur reference in view of the Gwon reference.

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Independent Claim 20 and Dependent Claims 21 through 23

Neither the Spaur reference nor the Gwon reference disclose or suggest the requirements, *inter alia*, of claim 20 of, "memory operably coupled to the processing module, wherein the memory stores operational instructions that cause the processing module to: . . . when the network interface protocol channel scan request is received, hop between a channel supporting the TCP connection within the WLAN a wireless local area network (WLAN) and other channels of the WLAN to avoid excess latency in acknowledging receipt of a datagram of the at least one datagrams or a portion of the datagram during scanning of the other channels of the WLAN."

With respect to the Spaur reference, the Office Action cites on pages 19 and 20 of the Office action, Figure 5A, items 170 through 182 and column 13, line 67 through column 14, line 3, as disclosing requirements of claim 20. However, the Office Action has incorrectly interpreted the Spaur reference. The Spaur reference with respect to Figure 5A, Items 170 through 182 at column 13, lines 8 through 16 states that:

At step 170, a decision is made as to whether or not the particular information transfer is to be started immediately. If this decision is in the affirmative, the link selector 64 takes control to initiate the transfer using one or more selected network channels 34a-34n at step 174. If the decision is in the negative, the information to be transferred is buffered and the link scheduler 70 obtains the current location of the mobile unit having the communications system 10 at step 178. The link scheduler 70 then determines the identity of other network channels that are becoming available for selection, based on current location of the mobile unit and the anticipated change in location of the mobile unit at step 182. The anticipated channels that are becoming available and their availability time is then provided, at step 186, to the link selector 64 for determining each of their suitability values.

Thus, the Spaur reference discloses that no transfer of information occurs until the link scheduler 70 determines the identity of other network channels that are becoming available for selection,

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based on current location of the mobile unit and the anticipated change in location of the mobile unit, at column 13, lines 8 through 16. This aspect of the Spaur reference actually teaches away from the embodiment in claim 20 of, "memory operably coupled to the processing module, wherein the memory stores operational instructions that cause the processing module to: . . . when the network interface protocol channel scan request is received, hop between a channel supporting the TCP connection within the WLAN a wireless local area network (WLAN) and other channels of the WLAN to avoid excess latency in acknowledging receipt of a datagram of the at least one datagrams or a portion of the datagram during scanning of the other channels of the WLAN." The Office Action also cites column 13, line 67 through column 14, line 3 as disclosing requirements of claim 20. Again, this Office Action has incorrectly taken a small portion of the Spaur reference out of context and misinterpreted the Spaur reference. At column 13, lines 43 through column 14, line 3, the Spaur reference states:

As part of the operational steps involving the link scheduler 70, a determination is made as to whether or not a currently utilized network channel might be unavailable or go off line before completion of the particular information transfer. In accordance with this function, at step 218, the current location of the mobile unit having the communications system 10 is obtained. At step 222, a determination is made as to when the currently utilized network channel will go off line. This determination uses the current location of the mobile unit and the anticipated change in position of the mobile unit using velocity information and/or route or schedule information that the mobile unit follows. . . . This information can be combined with location-related information regarding the next location node and the estimated time to travel to it. From this data, the link scheduler 70 can be used in determining that a particular channel will go off line, as well as network channels that will become available. After this determination is made, the link scheduler 70, at step 226, informs the link selector 64 of the date and time when the currently utilized network channel will go off line. The link selector 64 is able to use this information in controlling the switching from the currently used network channel to a new or different selected channel.

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Thus, the Spaur reference nowhere discloses how scanning of other channels is performed or hopping between a channel supporting the TCP connection within a wireless local area network (WLAN) and other channels of the WLAN to avoid excess latency. Thus, the Spaur reference fails to disclose the requirements, *inter alia*, of claim 20 of, "memory operably coupled to the processing module, wherein the memory stores operational instructions that cause the processing module to: . . . when the network interface protocol channel scan request is received, hop between a channel supporting the TCP connection within the WLAN a wireless local area network (WLAN) and other channels of the WLAN to avoid excess latency in acknowledging receipt of a datagram of the at least one datagrams or a portion of the datagram during scanning of the other channels of the WLAN."

The Gwon reference also fails to disclose or suggest the requirements, *inter alia*, of claim 20 of, "memory operably coupled to the processing module, wherein the memory stores operational instructions that cause the processing module to: . . . when the network interface protocol channel scan request is received, hop between a channel supporting the TCP connection within the WLAN a wireless local area network (WLAN) and other channels of the WLAN to avoid excess latency in acknowledging receipt of a datagram of the at least one datagrams or a portion of the datagram during scanning of the other channels of the WLAN." The Gwon reference describes a procedure for minimizing the handoff latency resulting from standard Mobile IP handoff procedures, as stated at column 2, lines 36 through 39. The Gwon reference describes that in order to prevent L3 handoff latency, a pre-registration handoff method allows the L3 handoff to begin even before the L2 handoff begins, as stated at column 2, lines 57 through 65. As stated in column 4, lines 13 through 35, IP tunnels are established between a source node and a set of candidate nodes. The tunnels are used to forward data to the mobile node after a communication link between the mobile node and the source node goes down. Once a target node is identified from the candidate nodes, using the tunnel from the source node to the target node, the mobile node keeps IP data communication with the source node after the L2 handoff but before the L3 handoff. Again at column 9, lines 35 through 51, the Gwon reference explains that:

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With the tunnel that remains up [between the old FA (oFA) and new FA (nFA)], the MN can receive data from the oFA while on the nFA's subnet. Thus, the tunnel between oFA and nFA allows the MN to continue using the oFA for data communication while on the nFA's subnet. . . . The MN must eventually perform a formal Mobile IP registration illustrated in FIG. 1 after an L2 link with the nFA is established, but this can be delayed as required by the MN. Until the MN performs registration, a new FA and an old FA will setup and move a tunnel as required to give MN continued connectivity.

Thus, the Gwon reference nowhere discloses how scanning of other channels is performed or hopping between a channel supporting the TCP connection within a wireless local area network (WLAN) and other channels of the WLAN to avoid excess latency. As such, the Gwon reference fails to disclose the requirements, *inter alia*, of claim 20 of, "memory operably coupled to the processing module, wherein the memory stores operational instructions that cause the processing module to: . . . when the network interface protocol channel scan request is received, hop between a channel supporting the TCP connection within the WLAN a wireless local area network (WLAN) and other channels of the WLAN to avoid excess latency in acknowledging receipt of a datagram of the at least one datagrams or a portion of the datagram during scanning of the other channels of the WLAN."

The combination of the references also fails to suggest the requirements of claim 20. As explained above, both the Spaur reference and the Gwon reference merely disclose handoff procedures without disclosing how scanning of other channels is performed or hopping between a channel supporting the TCP connection within a wireless local area network (WLAN) and other channels of the WLAN to avoid excess latency. Since neither the Spaur reference nor the Gwon reference disclose or suggest the requirements, *inter alia*, of claim 20 of, memory operably coupled to the processing module, wherein the memory stores operational instructions that cause the processing module to: . . . when the network interface protocol channel scan request is received, hop between a channel supporting the TCP connection within the WLAN a wireless local area network (WLAN) and other channels of the WLAN to avoid excess latency in acknowledging receipt of a datagram of the at least one datagrams or a portion of the datagram

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during scanning of the other channels of the WLAN,” the combination also fails to suggest the embodiment of claim 20.

The dependent claims 21 through 23 add further patentable matter to Claim 20 and thus are further differentiated and patentable under 35 U.S.C. §103 over the Spaur reference in view of the Gwon reference.

Independent Claim 24 and dependent Claims 25 through 28

Neither the Spaur reference nor the Gwon reference disclose or suggest the requirements, *inter alia*, of claim 24 of, “memory operably coupled to the processing module, wherein the memory stores operational instructions that cause the processing module to: when the one of the datagrams is being received when the channel scan request is received, scan at least one other channel of the plurality of channels, but less than all of the plurality of channels; after scanning the at least one other channel, tune to the one of the plurality of channels to transmit at least one outbound datagram; and scanning at least another channel of the plurality of channels.”

With respect to the Spaur reference, as stated above with respect to Independent Claim 14, the Spaur reference discloses that no transfer of information occurs until the link scheduler 70 determines the identity of other network channels that are becoming available for selection, based on current location of the mobile unit and the anticipated change in location of the mobile unit, at column 13, lines 8 through 16. This aspect of the Spaur reference actually teaches away from claim 24. The Spaur reference nowhere even discloses a request for scanning or how scanning of the channels is performed. Thus, the Spaur reference fails to disclose the requirements, *inter alia*, of claim 24 of, “memory operably coupled to the processing module, wherein the memory stores operational instructions that cause the processing module to: when the one of the datagrams is being received when the channel scan request is received, scan at least one other channel of the plurality of channels, but less than all of the plurality of channels; after scanning the at least one other channel, tune to the one of the plurality of channels to transmit at least one outbound datagram; and scanning at least another channel of the plurality of channels.”

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With respect to the Gwon reference, as stated above with respect to Independent Claim 14, the Gwon reference merely describes a procedure for minimizing L3 handoff latency using a pre-registration handoff method that allows the L3 handoff to begin even before the L2 handoff begins, as stated at column 2, lines 57 through 65. Thus, the Gwon reference nowhere discloses a request for scanning or how scanning of the channels is performed. As such, the Gwon reference fails to disclose the requirements, *inter alia*, of claim 24 of, "memory operably coupled to the processing module, wherein the memory stores operational instructions that cause the processing module to: when the one of the datagrams is being received when the channel scan request is received, scan at least one other channel of the plurality of channels, but less than all of the plurality of channels; after scanning the at least one other channel, tune to the one of the plurality of channels to transmit at least one outbound datagram; and scanning at least another channel of the plurality of channels."

The combination of the references also fails to suggest the requirements of claim 24. As explained above, both the Spaur reference and the Gwon reference merely disclose handoff procedures and fail to even disclose a request for scanning or how scanning of the channels is performed. Since neither the Spaur reference nor the Gwon reference disclose or suggest the requirements of claim 24.

The dependent claims 25 through 28 add further patentable matter to Claim 24 and thus are further differentiated and patentable under 35 U.S.C. §103 over the Spaur reference in view of the Gwon reference.

Independent Claim 29 and dependent Claims 30 through 32

Neither the Spaur reference nor the Gwon reference disclose or suggest the requirements, *inter alia*, of claim 29 of, "memory operably coupled to the processing module, wherein the memory stores operational instructions that cause the processing module to: when a Transmission Control Protocol (TCP) connection is established between a source and a destination, receive a network interface protocol channel scan request; and when the network interface protocol channel scan request is received, hop between a channel supporting the TCP connection within a wireless local area network (WLAN) and other channels of the WLAN to

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avoid excess latency in acknowledging receipt of a datagram of the at least one datagrams or a portion of the datagram during scanning of the other channels of the WLAN.”

With respect to the Spaur reference, as stated above with respect to Independent Claim 20, the Spaur reference discloses that no transfer of information occurs until the link scheduler 70 determines the identity of other network channels that are becoming available for selection, based on current location of the mobile unit and the anticipated change in location of the mobile unit, at column 13, lines 8 through 16. This aspect of the Spaur reference actually teaches away from claim 29. The Spaur reference nowhere even discloses how scanning of other channels is performed or hopping between a channel supporting the TCP connection within a wireless local area network (WLAN) and other channels of the WLAN to avoid excess latency. Thus, the Spaur reference fails to disclose the requirements, *inter alia*, of claim 29.

With respect to the Gwon reference, as stated above with respect to Independent Claim 14, the Gwon reference merely describes a procedure for minimizing L3 handoff latency using a pre-registration handoff method that allows the L3 handoff to begin even before the L2 handoff begins, as stated at column 2, lines 57 through 65. Thus, the Gwon reference nowhere discloses disclosing how scanning of other channels is performed or hopping between a channel supporting the TCP connection within a wireless local area network (WLAN) and other channels of the WLAN to avoid excess latency. As such, the Gwon reference fails to disclose the requirements of claim 29.

As explained above, the combination of the references also fails to suggest the requirements of claim 29. Both the Spaur reference and the Gwon reference merely disclose handoff procedures without disclosing how scanning of other channels is performed or hopping between a channel supporting the TCP connection within a wireless local area network (WLAN) and other channels of the WLAN to avoid excess latency. Since neither the Spaur reference nor the Gwon reference disclose or suggest the requirements of claim 29, the combination fails to disclose or suggest the requirements of claim 29.

The dependent claims 30 through 32 add further patentable matter to Claim 29 and thus are further differentiated and patentable under 35 U.S.C. §103 over the Spaur reference in view of the Gwon reference.

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Conclusion

For the above reasons, the foregoing response places the Application in condition for allowance. Therefore, it is respectfully requested that the rejection of the claims be withdrawn and full allowance granted. Should the Examiner have any further comments or suggestions, please contact Jessica Smith at (972) 240-5324.

Respectfully submitted,

Garlick, Harrison & Markison

Dated: July 26, 2007

/Jessica W. Smith/

Jessica W. Smith

Reg. No. 39,884

Garlick, Harrison & Markison

P.O. Box 160727

Austin, TX 78716-0727

(972) 240-5324